

REMARKS

The above amendments and following remarks are responsive to the points raised in the final Office Action mailed April 6, 2006. Upon entry of the above amendments, Claim 1 will have been amended and Claims 1, 4, and 5 will be pending. No new matter has been introduced. No new issues have been raised that require further consideration or search. Entry and reconsideration are respectfully requested.

Response to the Rejection under 35 U.S.C. § 103(a)

Claims 1, 4, and 5 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 6, 879,430 to Machida in view of US Patent 6,897,996 to Ikeda et al (Ikeda). Applicant respectfully traverses this rejection and respectfully submits that Machida and Ikeda, either alone or in combination, neither teach, suggest, nor otherwise rendered obvious the subject matter recited in Applicant's claims.

The present application is directed to an electrophoretic display characterized in that:

- (a) each of a plurality of microcapsules being disposed on and associated to one of a plurality of second electrodes ("one-to-one correspondence for microcapsule and second electrode"), and
- (b) two species of electrophoretic particles moved in mutually opposite directions along an electric field (created along a substrate on which the plurality of second electrodes are disposed) ("oppositely moved electrophoretic particles along substrate").

The applied reference of Machida fails to teach or suggest the above described features (a) and (b). More specifically, a single cell of Machida is not necessarily constituted by one pixel because the cell shown in Figure 19 thereof is constituted by 6x6 pixels and those shown in Figures 20 and 21 are constituted by a plurality of pixels. As such, Machida fails to teach or suggest one-to-one correspondence for microcapsule and second electrode.

With respect to electrophoretic particles, according to the disclosure of Machida, the negatively charged white particles 18 move toward the back substrate 14 side, and the positively charged black particles 20 move toward the display substrate 12 side by applying a pulse voltage of -200V to an isolated electrode (pixel electrode) 38B, as shown in Figure 6. On the other hand, under application of a pulse voltage of +200V, they move toward the opposite substrate sides, respectively (column 11, lines 39-66). Further, in column 11, line 65 - column 12, line 14, when the isolated electrodes 38A and 38C are grounded (i.e., supplied with 0V), and the isolated electrode is supplied with an alternating pulse voltage of $\pm 200V$, both the white and black particles not only move reciprocatingly between the display and back substrates but also are scatteringly moved in the directions of the isolated electrodes 38A and 38C (i.e., adjacent pixels).

As described above, in Machida, the two species of particles are moved, by application of the DC electric field, in a direction perpendicular to the substrates and are moved, by application of the AC electric field (probably by dielectric force acting on a dielectric member in a non-uniform electric field), in a direction parallel to the substrates. In other words, the positively charged particles and the negatively charged particles in

Machida are moved oppositely to each other in the direction perpendicular to the substrates but are not moved oppositely to each other in the direction parallel to the substrates.

Further, in Machida, both the display substrate and the back substrate are provided with an electrode, so that an electric field parallel to the substrate surface is little generated at any portion except for an electrode edge portion.

On the other hand, in the present invention, the first electrode and the plurality of second electrodes are disposed on one substrate so as to create an electric field parallel to the substrate. Along this electric field, two species of electrophoretic particles (positively and negatively charged particles) are moved in mutually opposite directions (the feature (b) described above). As a result, on the second electrodes, one species of electrophoretic particles are always located and the substrate surface is not exposed. Further, in the present invention, display is effected by the electrophoretic particles located on the second electrodes, so that it is not necessary to move the particles in the direction perpendicular to the substrate. In other words, display is effected by using a pair of electrodes disposed on one substrate.

Ikeda disclose an electrophoretic apparatus in which an electric field is applied in a horizontal direction. However, in Ikeda, electrophoretic particles used are only one species, thus failing to suggest microcapsules each containing two species of electrophoretic particles. In addition, Applicant further submits that Ikeda includes no additional teaching or suggestion that would lead one of ordinary skill in the art, at the time the invention was made, to modify the disclosure of Machida in view of the

disclosure of Ikeda, as advanced by the Examiner. As such, the subject matter recited in Claims 1, 4, and 5 is distinguished over Machida and Ikeda, either alone or in combination.

Accordingly, the rejection under 35 U.S.C. § 103(a) should be withdrawn.

CONCLUSION

Applicant respectfully submits that Claims 1, 4, and 5 are in condition for allowance and a notice to that effect is earnestly solicited.

AUTHORIZATIONS

The Commissioner is hereby authorized to charge any additional fees which may be required for the timely consideration of this amendment, or credit any overpayment to Deposit Account No. 13-4500, Order No. 1232-5270.

Respectfully submitted,
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